



## SEQUENCE LISTING

<110> Feussner, Ivo  
 Hornung, Ellen  
 Fritsche, Kathrin  
 Peitzsch, Nicola

<120> Fatty acid desaturase gene from plants

<130> 0050/50669

<140> US 09/721,756

<150> PCT/EP/00/08222

<151> 2000-08-23

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 <213> Calendula officinalis

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 Arg Met Ser Asp Pro Ser Glu Gly Lys Asn Ile Leu Glu Arg Val Pro  
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gtc gat cca ccg ttc acg tta agc gat ctg aag aaa gcg att cct acc 152  
 Val Asp Pro Pro Phe Thr Leu Ser Asp Leu Lys Lys Ala Ile Pro Thr  
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cat tgc ttt gag cga tct gtc atc cgg tca tca tac tat gtt gtt cat 200  
 His Cys Phe Glu Arg Ser Val Ile Arg Ser Ser Tyr Tyr Val Val His  
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gat ctc att gtt gcc tat gtc ttc tac tac ctt gca aac acg tat atc 248  
 Asp Leu Ile Val Ala Tyr Val Phe Tyr Tyr Leu Ala Asn Thr Tyr Ile  
 55 60 65

cct ctt att cct aca cct ctg gct tac cta gca tgg ccc gtt tac tgg 296  
 Pro Leu Ile Pro Thr Pro Leu Ala Tyr Leu Ala Trp Pro Val Tyr Trp  
 70 75 80 85

ttt tgt caa gct agc atc ctc acc ggc ctc tgg gtc atc ggt cac gaa 344



gaa gca agg gat gca atc aag cca gtg ttg ggc gag tac tat aaa atc 1064  
 Glu Ala Arg Asp Ala Ile Lys Pro Val Leu Gly Glu Tyr Tyr Lys Ile  
 330 335 340

gac agg act cca att ttc aaa gca atg tat aga gag gct aag gaa tgc 1112  
 Asp Arg Thr Pro Ile Phe Lys Ala Met Tyr Arg Glu Ala Lys Glu Cys  
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atc tac atc gag ccc gat gag gat agc gag cac aaa ggt gtg ttc tgg 1160  
 Ile Tyr Ile Glu Pro Asp Glu Asp Ser Glu His Lys Gly Val Phe Trp  
 360 365 370

tac cac aag atg taa tcaaaaaggt gtatgtcaat gcaattgtat gcttaattaa 1215  
 Tyr His Lys Met  
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Lys Ala Ile Pro Thr His Cys Phe Glu Arg Ser Val Ile Arg Ser Ser  
 35 40 45

Tyr Tyr Val Val His Asp Leu Ile Val Ala Tyr Val Phe Tyr Tyr Leu  
 50 55 60

Ala Asn Thr Tyr Ile Pro Leu Ile Pro Thr Pro Leu Ala Tyr Leu Ala  
 65 70 75 80

Trp Pro Val Tyr Trp Phe Cys Gln Ala Ser Ile Leu Thr Gly Leu Trp  
 85 90 95

Val Ile Gly His Glu Cys Gly His His Ala Phe Ser Asp Tyr Gln Leu  
 100 105 110

Ile Asp Asp Ile Val Gly Phe Val Leu His Ser Ala Leu Leu Thr Pro  
 115 120 125

Tyr Phe Ser Trp Lys Tyr Ser His Arg Asn His His Ala Asn Thr Asn  
 130 135 140

Ser Leu Asp Asn Asp Glu Val Tyr Ile Pro Lys Arg Lys Ser Lys Val  
 145 150 155 160

Lys Ile Tyr Ser Lys Leu Leu Asn Asn Pro Pro Gly Arg Val Phe Thr  
 165 170 175  
 Leu Val Phe Arg Leu Thr Leu Gly Phe Pro Leu Tyr Leu Leu Thr Asn  
 180 185 190  
 Ile Ser Gly Lys Lys Tyr Gly Arg Phe Ala Asn His Phe Asp Pro Met  
 195 200 205  
 Ser Pro Ile Phe Asn Asp Arg Glu Arg Val Gln Val Leu Leu Ser Asp  
 210 215 220  
 Phe Gly Leu Leu Ala Val Phe Tyr Ala Ile Lys Leu Leu Val Ala Ala  
 225 230 235 240  
 Lys Gly Ala Ala Trp Val Ile Asn Met Tyr Ala Ile Pro Val Leu Gly  
 245 250 255  
 Val Ser Val Phe Phe Val Leu Ile Thr Tyr Leu His His Thr His Leu  
 260 265 270  
 Ser Leu Pro His Tyr Asp Ser Thr Glu Trp Asn Trp Ile Lys Gly Ala  
 275 280 285  
 Leu Ser Thr Ile Asp Arg Asp Phe Gly Phe Leu Asn Arg Val Phe His  
 290 295 300  
 Asp Val Thr His Thr His Val Leu His His Leu Ile Ser Tyr Ile Pro  
 305 310 315 320  
 His Tyr His Ala Lys Glu Ala Arg Asp Ala Ile Lys Pro Val Leu Gly  
 325 330 335  
 Glu Tyr Tyr Lys Ile Asp Arg Thr Pro Ile Phe Lys Ala Met Tyr Arg  
 340 345 350  
 Glu Ala Lys Glu Cys Ile Tyr Ile Glu Pro Asp Glu Asp Ser Glu His  
 355 360 365  
 Lys Gly Val Phe Trp Tyr His Lys Met  
 370 375